

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

The non-elected Claims 1-5 and 8-9 have been canceled without prejudice to the filing of a divisional application directed thereto. New Claim 10 corresponds to Claim 6, but recites that the claimed steps are sequential.

Claims 6-7 and 10 are directed to a method of producing an electrode for fuel cells. As is recited in the claims, the method includes the steps of establishing a water repellent finished state of an electrode structure which is electrically conductive and gas permeable, carrying a catalyst on the water repellent finished electrode structure, and applying ion exchange resin onto the catalyst carrying electrode structure. For example, the water repellent finished state may be established by fixing PTFE on the surface of the electrode structure (paragraph 0036). Subsequently, a catalyst is carried thereon, for example as described in paragraph 0037. An ion exchange resin is then applied onto the catalyst carrying electrode structure (paragraph 0038). The direct contact of the catalyst onto the electrode structure causes the catalyst to contact directly with the electrode structure which acts as a current collector without interposition of an ion exchange resin, whereby the catalyst contributes to the electrochemical reaction effectively, resulting in increasing the catalyst utilization rate. In addition, the direct contact between the catalyst and the electrode structure makes the fuel cell electrode excellent in electric conductivity. Moreover, due to the fact that the construction of the electrode structure ensures good gas and water dispersion properties, the fuel cell electrode becomes excellent in gas and water dispersion (paragraph 0023).

Claim 6 was rejected under 35 U.S.C. § 102 as being anticipated by the U.S. patent to Zuber. However, this is respectfully traversed.

Zuber is directed to a membrane-electrode unit for polymer-electrolyte fuel cells that comprises a polymer-electrolyte membrane with porous reaction layers of catalyst and

ionomer applied to both sides. The reaction layers comprise an inhomogeneous microstructure that is formed from a part A1 of the catalyst saturated with ionomer and embedded in the ionomer and the remaining part A2 of the catalyst that is kept free of the ionomer (col. 3, lines 9-19). The process used to prepare the membrane-electrode unit includes the preparation of an ink A by dispersing the part A1 of the catalyst in a solution of an ionomer in a solvent A, preparation of an ink B by dispersing the part A2 of the catalyst in a solvent B, combination of ink A and ink B to form a joint ink C, coating of the polymer-electrolyte membrane with ink C, and drying the coating (col. 3, lines 59-67; col. 4, lines 1-7).

Thus, the catalyst in Zuber is dispersed in an ionomer solution and *applied simultaneously* with the ionomer solution. It is not applied “onto the catalyst carrying electrode structure” (claim 6), nor is it applied in a “sequential” step (claim 10). Additionally, there is no description in Zuber of establishing a water repellent finished state of an electrode structure.

The examiner has noted the description found at portions of columns 4 and 5 of Zuber, as well a Fig. 1 which shows the electrode unit including conductive particles 3, catalyst 4, and resin 5. However, this is only the structure of the electrode unit. It is not a teaching of the process steps used to produce the same. In fact, Zuber teaches a different process. Thus, Zuber clearly fails to anticipate the claims.

An Information Disclosure Statement is being submitted herewith.

Concerning paragraph 3 of the Office Action, Applicants is submitting a new Fig. 6 which illustrates the ion exchange resin.

Applicant therefore believes that the present application is in a condition for allowance and respectfully solicits an early Notice of Allowability.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Registration No. 24,618
Robert T. Pous
Registration Number 29,099
Attorneys of Record

Customer Number

22850

NFO/RTP:sjh
I:\ATTY\RTP\218103US-AM.DOC

James D. Hamilton
Registration No. 28,421